NOTE VIII.

ON A REMARKABLE HETERONEREIS FROM THE NORTHCOAST OF EAST-JAVA

BY

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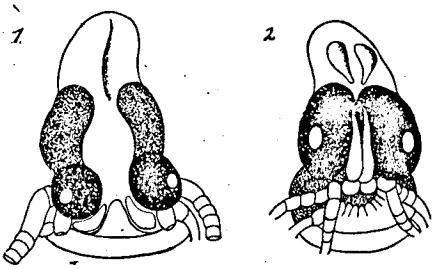
(With 5 text-figures).

During a night in August 1910 Mr. P. Buitendijk catched on the road of Panaroekan, with the pelagic net, a curious *Heteronereis*-specimen, differing from the species usually met with by the shape of its cephalic lobe, but agreeing in many regards with a similar form from the Gulf of California, collected in 1900 by Diguet and afterwards described by Gravier [1]). Our worm (a ♂) is rather small, measuring only 13 mm. in length, whereas the largest of the California-specimens reaches 23 mm.; the number of its segments amounts to 95. The body shows dorsally on each side a double row of black spots, consisting of a narrow transverse one at the base of each foot and another round patch on the middle of it; ventrally also there occurs a dark spot at the base of each foot. On the other hand the California-species is characterized by a dark transverse band about across the middle of the dorsum of each segment.

The prostomium (figs. 1 and 2) is broadly rounded anteriorly, somewhat resembling the bill of a duck, with a longitudinal ridge along its middle. The two pairs of eyes are highly enlarged, close to each other. However only the posterior

1) Bulletin du Muséum d'Hist. naturelle, t. VII, 1901, p. 177, figs. 1—11.

pair, globular in shape, is situated dorsally, with the lens directed upwards; the anterior pair, elliptical in shape, is



Figs. 1 and 2. Anterior part of the body.
Fig. 1. Dorsal view; fig. 2. Ventral view.

for the greater part situated ventrally, having its lens directed downwards. As suggested by Gravier, these pelagic worms probably are swimming as easily on their back as on their belly.

The two antennae, usually situated in front of the prostomium, are totally displaced to its ventral side at some distance from the anterior end, directed with their tips backwards. Also the palps, emerging in other species at the sides of the head and consisting of a large basal joint and a short terminal one, are entirely concealed under the head and possess a small proximal part and an elongated, conical, distal one; in the California-species these joints seem to be short and blunt. The upper pair of tentacular cirri appear to be broken off at their base and therefore it could not be stated how far they extended backwards, whereas in the California-species they reach about the 16th segment; the inferior pair is the shortest and extends only to the 4th segment. All these cirri are annulated over the greater part of their length. Like in other *Heteronereis*-forms the ventral and dorsal cirri in the anterior region of the body show some modifications; in the anterior 4 segments the ventral cirrus is gibbous near its distal end, whereas in the anterior 7 segments the dorsal cirrus is not only much elongated, but also enlarged in front of the tip, that is bent downwards (fig. 3). The lip

of the dorsal setigerous lobe bluntly conical, the lips of the ventral lobe very short, not projecting; the superior ligula somewhat arched, nearly as long as the dorsal lobe, whereas the inferior ligula is blunt and conical, about as long as the fusiform ventral cirrus. In the dorsal lobe there occur only two homogomph setose bristles of the ordinary shape, with a somewhat concave posterior border and its anterior one furnished with ciliae, as figured by Gravier in figure 6. In the ventral lobe the superior fascicle contains two of these homogomph setose bristles and some heterogomph falcate ones; its inferior fascicle however presents, besides some of these falcate bristles, two heterogomph setose ones with their terminal joint shorter, and a convex posterior border, as figured by Gravier in fig. 7.

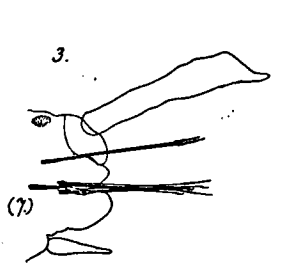


Fig. 3. Parapodium of 7th setigerous segment.

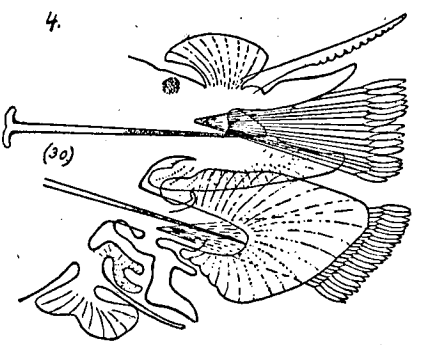


Fig. 4. Parapodium of 30th setigerous segment.

The epitocous transformation of the posterior body-region commences at the 14th segment. Here (fig. 4) the feet present a conically elongated dorsal ligula with an incisura near its base, whereas the dorsal cirrus, a third longer, is provided with a dozen of papillae along its inferior border; these papillae disappear at about the 70th pair of feet. Behind the ligula there is a rounded lamella, convex in front, concave behind. The lip of the dorsal lobe conical, about as long as the dorsal ligula, with a narrow lamella along its inferior border. The ventral lobe bluntly conical with a large heart-shaped lamella, that is provided dorsally

with an auricular appendage near its base, whereas ventrally it has a crenulated and lobulated border. The inferior ligula, about of the same length as the ventral lobe, boot-shaped, with a narrow horizontal process at its base, behind as well as in front; in the California-species the inferior ligula is more simple, without these processes, only with a boss at its upper border. The ventral cirrus slender, as long as the inferior ligula, dorsally with a small bifurcated lamella, ventrally with a larger one, emarginated in the middle of its inferior border; in the California-species the dorsal lamella is simple, not bifurcated. As also is stated by Gravier the swim-bristles (fig. 5) have a slightly heterogomph shaft. Their knife-shaped terminal pieces have the dorsal border finely serrulated till at some distance from the distal end; their surface shows faint, parallel, longitudinal lines, except on the blunt top, that is furnished with some transverse ridges; the number of these ridges increases by little and little in the more upwards situated bristles of a fascicle, the superior ones even being wrinkled over their total surface.

Fig. 5. Swim-bristle of the epitocous body-region.

As the proboscis was not protruded nothing can be said about the arrangement of the paragnathi; however Gravier has stated in the California-species groups of conical denticles upon both its regions. Therefore these species must belong to one of the subgenera *Nereis*, *Eunereis*, *Ceratonereis* or *Neanthes*, unless they represent probably a hitherto unknown genus.

Leyden Museum, January 1911.